

REMARKS/ARGUMENTS

An RCE is being filed simultaneously herewith.

In the final Office Action rejection of May 16, 2003, claims were rejected upon a combination of the teachings of Hochstein and Pederson, and also Cheriff in view of Metz, as explained in the Action.

Claim 11 is amended by adding the features

a) that the conductor tracks (9) are placed only on the printed circuit board, and

b) that the light emitting diodes (7) are placed only on one face of the printed circuit board (4). This distinguishes claim 11 from Hochstein and Pederson for the following reasons. A similar analysis distinguishes the claims from Cheriff in view of Metz.

The first feature a) is in contrast to Hochstein, who teaches to build conductor tracks not only on the printed circuit board but also inside the circuit board, namely the pads 50: col. 5 lines 48-52: The electrical paths 34 between LED leads 30 and 32 are integral with the extension of the pads 50. This means that the pads 50 are conductor tracks which are inside the circuit board 26, so that there is a very complex structure in opposition to the amended feature.

The second feature b) is in contrast to Pederson, who teaches to mount the LEDs 16 not only on the printed circuit board but also

in wells 60: These wells are holes or openings in the printed circuit board as can be seen by Fig. 1, into which the LEDs including part 74 of the LEDs is positioned as can be seen by Figs. 5-7 of Pederson.

So Pederson teaches to transport the heat of the LEDs through the wells 60 via the air to the heat sink housing 12.

Hochstein on the other hand teaches to transport the heat of the LEDs via complex pads 50 to a heat sink 36a.

So it is not clear why the person skilled in the art would have come to a device as in new claim 11 since Hochstein teaches to lead the heat via additional pads and Pederson teaches to mount the LEDs within the printed circuit board to lead the heat of the LEDs away from the printed circuit board.

A further distinction is provided by new claim 23 which has the features previously set forth in claim 11, and states further that the printed circuit board (4) projects from the stable mounting board (2) at one side to reach a plug connection (12).

This new feature can be seen from the drawings and the description on page 5 of the present specification, second paragraph.

A device with the features of this new claim cannot be received by Metz in view of Cheriff or vice versa. Metz describes dissipation of the heat of an LED display 2 on the same side of a rigid printed circuit board 10 by a complex structure 8, 9, 11.

Cheriff describes a flexible cable assembly similar to the new claim in the opinion of the Examiner, but with essential differences:

Cheriff does neither describe mounting of LEDs on a flexible printed circuit board nor to mount a display element on the flexible printed circuit board; he only describes mounting a driving element 12 for a display element 58 on the flexible printed circuit board 11. The display element 58 is not mounted on the flexible circuit board 11 but in the rigid display assembly 50, to which the flexible circuit board 11 can be connected. The other devices in col. 3 L. 10 cited by the Examiner refer only to the leadless chip carrier 12 which provides the means for interconnecting one more circuit chips or other devices within said carrier. But these chips or other devices are neither LEDs nor display devices but only the drivers for the display device 58. Cheriff does not describe anywhere to mount devices other than drivers on the flexible printed circuit board. Drivers for displays do not comprise LEDs and do not provide such excessive heat as LEDs do. So the person skilled in the art has no reason to combine Metz with Cheriff to attain a device as claimed in this new claim.

The Examiner is respectfully requested to respond to applicant's timely filed Second Information Disclosure Statement filed 4/30/03 and to consider and initial the references.

An IDS (with PTO-1449) listing two references namely DE 196 21 148 and US 5,632,551 is submitted herein for consideration along with copies of the references.

Reference DE 196 21 148, disclosed herewith (copy enclosed) as an IDS cited in the corresponding German Examination Report, describes in Fig. 1 LEDs 3 on a flexible circuit board 11, the LEDs being mounted as shown in Fig. 4 (Ref. no. 4 for LED in Fig. 4, Ref. no. 3 in Fig. 1) mounted by a stick-through mounting so that an additional lacquer-layer 4 is required to protect the electrical supports of the LEDs from short circuiting when mounting the device on a carrier 10. So this reference is more distant than the cited references of the PTO.

Roney et al US 5,632,551 (copy enclosed) also cited in the corresponding German Examination Report, shows a rigid printed circuit board with LEDs mounted by stick-through mounting 220 so that there is an electrical isolation medium 14 with thermally conductive particles. So this reference is more distant than the references cited by the PTO.

Amended claim 22 is distinguishable from the art for the reasons set forth above. This amendment and argument are believed to overcome the rejections under 35 USC 103.

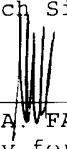
In the event there are further issues remaining in any respect the Examiner is respectfully requested to telephone attorney to reach agreement to expedite issuance of this application.

Since the present claims set forth the present invention patentably and distinctly, and are not taught by the cited art either taken alone or in combination, this amendment is believed to place this case in condition for allowance and the Examiner is

respectfully requested to reconsider the matter, enter this amendment, and to allow all of the claims in this case.

Respectfully submitted,

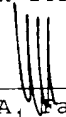
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CERTIFICATE OF MAILING UNDER 37 CFR SECTION 1.8(a)

I hereby certify that the accompanying Amendment and IDS, PTO-1449 and two references are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313, on September 16, 2003.

Dated: September 16, 2003


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